

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method of recording a data stream including multi-path stream ~~section~~ sections in a recording medium, comprising ~~the steps of:~~

(a) ~~recording the data stream in a recording medium; and~~
(b) grouping the multi-path stream ~~section~~ sections of the recorded data stream into a single stream object; and

providing a mapping list for accessing the multi-path stream sections in the single stream object,

wherein the mapping list includes:

time entry information for identifying a position of each multi-path stream section, said time entry information for a respective multi-path stream section including a cumulative sum of time lengths of preceding multi-path sections having a same path as the respective multi-path section.

2. (Currently Amended) The method set forth in claim 1, ~~further comprising the step of creating time entries having~~ wherein the time entry information further includes location information indicating each boundary position between multi-path stream sections segments of different ~~path paths,~~ and recording the created time entries.

3. (Currently Amended) The method set forth in claim 2, wherein said time entry information further contains information notifying whether or not a corresponding data stream interval ~~is for~~ includes multi-path stream sections ~~section~~

~~or not.~~

4. (Currently Amended) The method set forth in claim 3, wherein said time entry information further contains a path number if the corresponding data stream interval ~~is for~~ includes the multi-path stream sections.

5. (Currently Amended) The method set forth in claim ~~23~~, wherein said location information is an index number of a start stream object unit among stream object units constituting the data stream interval associated with said time entry.

6. (Currently Amended) ~~The method set forth in claim 1, further comprising the step of~~ A method of recording a data stream including multi-path stream sections in a recording medium, comprising:

grouping and recording the multi-path stream sections of the data stream into a single stream object; and

creating and recording time entries, each time entry having information on an accumulated size and time length of a preceding data stream section before a data stream interval each time entry covers.

7. (Currently Amended) The method set forth in claim 6, wherein the time length of a part of the preceding data stream section is summed in said accumulated time length information of each time entry, if path numbers of the part of preceding data stream section and corresponding data stream interval are the same, whereas the size of the preceding data stream section is summed in said accumulated size information of each time entry even if the path numbers are not the same.

8. (Canceled).

9. (Currently Amended) A method of searching a data stream including multi-path stream ~~section~~ sections recorded in a recording medium, comprising ~~the~~ steps of:

(a) searching for a time entry whose accumulated time length is closest to a target value when ~~an~~ a searching operation is requested;

(b) checking whether a path information written in the time entry found in said step (a) is equal to an entered path number; and

(c) searching for a location of a recorded data stream pointed to by an accumulated size information written in the found time entry, based on the checked result.

10. (Currently Amended) The method set forth in claim 9, further comprising ~~the step of~~ reproducing the recorded data stream from the location found in said step (c), and determining where ~~of~~ in the reproduced data stream is an exact position of the target value.

11. (Currently Amended) The method set forth in claim 9, wherein said step (c) searches for ~~a~~the location of the recorded data stream pointed to by the accumulated size information with reference to a location information written in the found time entry.

12. (Currently Amended) The method set forth in claim 11, wherein said

location information is an index number of a stream object unit ~~constituting the data stream interval~~ a corresponding time entry covers.

13. (Currently Amended) The method set forth in claim 9, wherein said step (a) searches for a time entry whose accumulated time length is smaller than and closest to the target value.

14. (Currently Amended) A method of searching data stream including multi-path stream ~~sections~~ sections recorded in a recording medium, comprising ~~the steps of:~~

(a) summing up an incremental time length and incremental size written in each time entry for a respective multipath stream section;

(b) determining a time entry whose incremental time length makes the summed time length closest to a target value;

(c) checking whether a path information written in the determined time entry is equal to an entered path number; and

(d) searching for a location of the recorded data stream close to a position of the target value, based on the checked result.

15. (Original) The method set forth in claim 14, wherein said step (d) searches for the location of recorded data stream with reference to a location information written in the determined time entry and the summed time length subtracted by the incremental size of the determined time entry.

16. (Original) The method set forth in claim 15, wherein said location

information is an index number of a stream object unit constituting the recorded data stream.

17. (Currently Amended) The method set forth in claim 14, further comprising ~~the step of~~ reproducing the recorded data stream from the location found in said step (d), and determining where ~~of~~in the reproduced data stream is an exact position of the target value.

18. (Original) The method set forth in claim 14, wherein said step (b) determines a time entry whose incremental time length makes the summed time length become larger than the target value.

19. (Currently Amended) The method set forth in claim 14, wherein said step (a) sums the incremental time length of each time entry whose path information is the same if the time entry is for a multi-path data stream, and sums the incremental sizes of all preceding time entries irrespective of path information.

20. (Currently Amended) A recording medium containing recorded data ~~which are composed of~~ to be reproduced by a video player, said recording medium comprising:

a number of stream object units constituting a data stream ~~and a number of time entries, each having navigation information for each of several stream object units, wherein multi-path stream section sections of the data stream is are grouped into a single stream object and there should be time entries having location information pointing each boundary between stream segments of different path which~~

~~are located in the multi-path stream section; and~~

a mapping list for accessing the multi-path stream sections in the single stream object, said mapping list including time entry information for identifying a position of each multi-path stream section, said time entry information for a respective multi-path stream section including a cumulative sum of time lengths of preceding multi-path sections having a same path as the respective multi-path section.

21. (Currently Amended) The recording medium set forth in claim 20, wherein said time entry information further contains path identifying data and information notifying whether or not a corresponding data stream interval each time entry information covers ~~is for~~ includes the multi-path stream sections ~~or not~~.

22. (Currently Amended) The recording medium set forth in claim 20, wherein said time entry contains accumulated time length and size of a preceding data stream before a data stream interval said time entry covers.

23. (Currently Amended) The recording medium set forth in claim 20, wherein said time entry contains an incremental time length and size of a data stream interval said time entry covers.